



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0617; Directorate Identifier 2007-NM-354-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking (NPRM); reopening of comment period.

SUMMARY: We are revising an earlier proposed airworthiness directive (AD) for certain The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. That NPRM proposed to require repetitive operational tests of the engine fuel suction feed of the fuel system, and other related testing if necessary. That NPRM was prompted by a report of an in-service occurrence of total loss of boost pump pressure of the fuel feed system, followed by loss of fuel system suction feed capability on one engine, and in-flight shutdown of the engine. This action revises that NPRM by proposing to require repetitive operational tests, and other related testing and corrective action if necessary. We are proposing this supplemental NPRM to detect and correct loss of the engine fuel suction feed capability of the fuel system, which in the event of total loss of the fuel boost pumps could result in dual engine flameout, inability to restart the engines, and consequent forced landing of the airplane.

Since these actions impose an additional burden over that proposed in the previous NPRM, we are reopening the comment period to allow the public the chance to comment on these proposed changes.

DATES: We must receive comments on this supplemental NPRM by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Sue Lucier, Aerospace Engineer, Propulsion Branch, ANM-140S, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6438; fax: 425-917-6590; e-mail: suzanne.lucier@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2008-0617; Directorate Identifier 2007-NM-354-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We issued an NPRM to amend 14 CFR part 39 to include an AD that would apply to certain The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. That NPRM published in the Federal Register on June 6, 2008 (73 FR 32255). That NPRM proposed to require repetitive operational tests of the engine fuel suction feed of the fuel system, and other related testing if necessary.

Actions Since Previous NPRM (73 FR 32255, June 6, 2008) was Issued

Since we issued the previous NPRM (73 FR 32255, June 6, 2008), we have received comments from operators indicating a high level of difficulty performing the actions in the previous NPRM during maintenance operations.

Relevant Service Information

We reviewed Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D626A001-CMR, Revision August 2011, of the Boeing 737-600/700/700C/800/900/900ER Maintenance Planning Data (MPD) Document. Among other things, Section 9 describes AWL No. 28-AWL-101, Engine Fuel Suction Feed Operational Test, of Section E., AWLS - Fuel Systems, which provides procedures for performing repetitive operational tests of the engine fuel suction feed of the fuel system.

Comments

We gave the public the opportunity to comment on the previous NPRM (73 FR 32255, June 6, 2008). The following presents the comments received on the previous NPRM and the FAA's response to each comment.

Requests to Change Approved Method of Compliance for Operational Test

Continental Airlines (CAL), Airlines for America (A4A) on behalf of its member American Airlines (AAL), and Sun Country Airlines asked that the approved method of compliance specified in paragraph (f) of the previous NPRM (73 FR 32255, June 6, 2008) be changed to refer to the airplane maintenance manual (AMM) instead of requiring the repetitive tasks.

CAL and AAL recommended that certain language in paragraph (f) of the previous NPRM (73 FR 32255, June 6, 2008) be changed to require incorporation of the operational test into the operator's maintenance program in the same manner as the Instructions for Continued Airworthiness (ICA).

AAL stated that since there is no modification or terminating action for the actions specified in the previous NPRM (73 FR 32255, June 6, 2008), the AD need not mandate the task itself. AAL noted that operators should be required to incorporate into their respective maintenance programs a mandatory task, as specified in CMRs, AWLs, or airworthiness limitation items. AAL stated that this approach would be consistent with

the processes utilized by operators for the SFAR 88 (66 FR 23086, May 7, 2001) requirements.

We agree with the requests to refer to the AMM. AWL No. 28-AWL-101 refers to the AMM. We have replaced paragraph (f) of the previous NPRM (73 FR 32255, June 6, 2008), with a new paragraph (g) in this supplemental NPRM that would require the operational tests as specified in the MPD.

Sun Country Airlines stated that related AMM tasks are equivalent procedures for performing the operational test referred to in paragraph (f) of the previous NPRM (73 FR 32255, June 6, 2008). This commenter stated that clarification should be provided as to whether using the procedures specified in AMM Task 28-22-00-710-801 meets the intent of paragraph (f) of the previous NPRM. This commenter also noted that, because the AMM task is already contained in Task Card 28-050-00-01, and has a repetitive interval identified in the MPD, the repetitive action should be removed from the previous NPRM and addressed as a CMR.

We disagree with the commenter's request. The manifold test (Task 28-22-00-710-801) is not equivalent to the operational test (Task 28-22-00-710-802) for the purposes of this proposed action. The positive internal fuel line pressure applied during the manifold test does not simulate the same conditions encountered during fuel suction feed (i.e., vacuum), and may mask a failure. We have not changed the supplemental NPRM in this regard.

Requests to Clarify if Engine Fuel Suction Feed Test is Allowed in lieu of the Operational Test

KLM, A4A on behalf of its member DAL, and Sun Country Airlines asked that we clarify the engine fuel suction feed test procedure in the AMM as an option to performing the operational test. KLM suggested that we consider the test procedure done per AMM Task 28-22-15-710-801 as an alternative test. KLM added that this alternative test is allowed by MPD 28-050-00, and is mentioned in Task Card 28-050-00-01. KLM

noted that the advantage of this alternative test is that it can be performed without fuel in the tank; therefore, if the tanks are still open during the test and the test fails, easy access is gained to the damaged area. DAL stated that the intention of the previous NPRM (73 FR 32255, June 6, 2008) seems to be performing an engine fuel suction feed test, so paragraph (f) of the previous NPRM should be clarified to include that test as an option. The commenters stated that the engine fuel suction feed test in the AMM and the operational test in the previous NPRM are equivalent tests and are allowed per Task Card 28-050-00-01.

We agree to provide clarification. As noted previously, the manifold test (Task 28-22-00-710-801) is not equivalent to the operational test (Task 28-22-00-710-802) for the purposes of this proposed action. The positive internal fuel line pressure applied during the manifold test does not simulate the same conditions encountered during fuel suction feed (i.e., vacuum), and may mask a failure. Therefore, we have not changed the supplemental NPRM in this regard.

Request to Include Corrective Action

Boeing and CAL asked that corrective action be included in the proposed requirements of the previous NPRM (73 FR 32255, June 6, 2008). CAL recommended that paragraph (f) of the previous NPRM be changed to also “correct any discrepancy identified as necessary, before further flight. Refer to 737NG FIM 28-22 task 819.” CAL noted that the fault isolation manual (FIM) should be considered as an ICA that is an approved method by the Manager, Seattle Aircraft Certification Office (ACO), FAA. Boeing stated that the requirement in the preamble of the previous NPRM (FAA’s Conclusions) for additional testing would be better described as performing corrective action in case the engine suction feed operational test is not successful.

We agree with the requests to include corrective action for this supplemental NPRM. Since the current revision of the AWL does not include the corrective action,

paragraph (g) of this supplemental NPRM specifies that corrective action for findings from the operational tests be done in accordance with a method approved by the Manager, Seattle ACO, FAA.

Requests to Revise Repetitive Interval

CAL, Qantas Airways Ltd (Qantas), and Boeing asked that we revise the compliance time for the repetitive operational test proposed by paragraph (f) of the previous NPRM (73 FR 32255, June 6, 2008).

CAL asked that the interval be extended from 7,500 flight hours to 2C-check or 12,500 flight hours, whichever occurs first. As justification for extending the repetitive interval, CAL stated that fleet history revealed no reported engine flameout events or related operational discrepancies.

Qantas and Boeing asked that the repetitive interval be changed to 7,500 flight hours or 36 months, whichever occurs first. Qantas and Boeing stated that, for low-utilization airplanes, it would take more than 10 years of operation before an operational test would be necessary.

We agree to revise the compliance times. We have added new paragraph (g) to this supplemental NPRM to include an initial test within 7,500 flight hours or 36 months, whichever occurs first after the maintenance program is revised. We have also included a repetitive interval of 7,500 flight hours or 36 months, whichever occurs first.

Request to Include Warning Information

CAL suggested that the Boeing service manuals include a critical design configuration control limitations (CDCCL) warning identification statement to alert maintenance personnel of the importance of regulatory compliance, as well as the configuration control requirement of the task. CAL did not include any justification for this request.

We agree that a CDCCL warning statement would serve as direct communication to maintenance personnel that there is an AD associated with certain maintenance actions, but do not find this additional measure necessary to adequately address the unsafe condition. We have made no change to the supplemental NPRM in this regard.

Request to Clarify the Reason for the Unsafe Condition

Boeing asked that we clarify the unsafe condition identified in the previous NPRM (73 FR 32255, June 6, 2008) by specifying that the AD results from a report of an in-service occurrence of total loss of pressure of the fuel feed system, followed by loss of fuel system suction feed capability on one engine.

We agree to clarify the unsafe condition. We have revised the Summary section and paragraph (e) of this supplemental NPRM accordingly.

Request to Revise Costs of Compliance Section

A4A, on behalf of its member DAL, asked that the cost estimate be changed. DAL stated that the cost estimate specified in the previous NPRM (73 FR 32255, June 6, 2008) is too low, and asked that it be changed. DAL noted that \$80 per product based on 1 work hour per product does not include the cost of fuel. DAL estimated that the cost of fuel alone would be \$83 per test occurrence; for the 71 airplanes in its fleet, this translates to a cost of \$5,893 per test cycle.

We do not agree that the cost estimate should be changed. ADs, which require specific actions to address specific unsafe conditions, appear to impose costs that would not otherwise be borne by operators. However, because of the general obligation of operators to maintain and operate their airplanes in an airworthy condition, this appearance is deceptive. Attributing those fuel costs solely to the issuance of this AD is

unrealistic because, in the interest of maintaining and operating safe airplanes, prudent operators would accomplish the required actions even if they were not required to do so by the AD. In any case, we have determined that direct and incidental costs are still outweighed by the safety benefits of the AD. Except for updating the hourly labor rate to \$85, we have made no further change to the cost estimates provided in this supplemental NPRM.

FAA's Determination

We are proposing this supplemental NPRM because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design. Certain changes described above expand the scope of the original NPRM (73 FR 32255, June 6, 2008). As a result, we have determined that it is necessary to reopen the comment period to provide additional opportunity for the public to comment on this supplemental NPRM.

Proposed Requirements of the Supplemental NPRM

This supplemental NPRM revises the previous NPRM (73 FR 32255, June 6, 2008); by proposing to require repetitive operational tests of the engine fuel suction feed of the fuel system, and would require other related testing and corrective action if necessary.

Explanation of Change to Costs of Compliance

Since issuance of the previous NPRM (73 FR 32255, June 6, 2008), we have increased the labor rate used in the Costs of Compliance from \$80 per work-hour to \$85 per work-hour. The Costs of Compliance information, below, reflects this increase in the specified labor rate.

Costs of Compliance

We estimate that this proposed AD would affect 1,080 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Cost per product	Cost on U.S. operators
Operational Test	1 work-hour X \$85 per hour = \$85	\$85	\$91,800

We have received no definitive data that would enable us to provide a cost estimate for the on-condition actions or the optional terminating action specified in this AD.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs" describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

The Boeing Company: Docket No. FAA-2008-0617; Directorate Identifier 2007-NM-354-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, certificated in any category, with a date of issuance of the original airworthiness certificate or the date of issuance of the original export certificate of airworthiness before March 22, 2011.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 2800, Aircraft Fuel System.

(e) Unsafe Condition

This AD was prompted by a report of an in-service occurrence of total loss of boost pump pressure of the fuel feed system, followed by loss of fuel system suction feed capability on one engine, and in-flight shutdown of the engine. We are issuing this AD to detect and correct loss of the engine fuel suction feed capability of the fuel system, which in the event of total loss of the fuel boost pumps could result in dual engine flameout, inability to restart the engines, and consequent forced landing of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Initial/Repetitive Operational Tests

Within 7,500 flight hours or 36 months after the effective date of this AD, whichever occurs first: Do the initial operational test identified in AWL No. 28-AWL-101, Engine Fuel Suction Feed Operational Test, of Section E., AWLS – Fuel Systems of Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D626A001-CMR, Revision August 2011, of Boeing 737-600/700/700C/800/900/900ER Maintenance Planning Data (MPD) Document. Repeat the test thereafter at intervals not to exceed 7,500 flight hours or 36 months, whichever is earlier. If the test is not considered successful, as specified in AWL No. 28-

AWL-101, before further flight, perform all related testing and corrective actions, using a method approved in accordance with the procedures specified in paragraph (h) of this AD. Thereafter, except as provided in paragraph (h) of this AD, no alternative procedure or repeat test intervals will be allowed.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be e-mailed to:

9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

(1) For more information about this AD, contact Sue Lucier, Aerospace Engineer, Propulsion Branch, ANM-140S, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6438; fax: 425-917-6590; e-mail: suzanne.lucier@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on June 18, 2012.

John P. Piccola,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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